

REMARKS

Applicants thank the Examiner for the courtesy extended to Applicants' attorney during the interview held May 16, 2006, in the above-identified application. During the interview, Applicants' attorney explained the presently-claimed invention and why it is patentable over the applied prior art, and discussed other issues raised in the Office Action. The discussion is summarized and expanded upon below.

The invention relates to a composition which has long-lasting and consistently good flowability and comprises a polyamide powder and a flow aid. The composition can be used for coating moldings or for the production of test specimens by laser-sintering. The composition may also be used in the production of cosmetics or coating materials.

As described in the specification under "Description of the Background" beginning at page 1, line 13, it is known in the prior art that polyamide powders absorb water, which water absorption leads to caking, which results in poor flowability. Various prior art suggestions exist to improve the flowability of polyamides. The prior art has not been fully successful.

Applicants have discovered that when a particular flow aid having particular drying loss characteristics is added to a polyamide, flowability can be improved regardless of storage conditions. As recited in above-amended Claim 1, the invention is a composition comprising, by weight of the composition, of from 88 to 99.99% of a polymer selected from the group consisting of a polyamide, a compound of a polyamide, and mixtures thereof, and from 0.01 to 0.25% of a flow aid selected from the group consisting of a hydrophobicized silica, a hydrophobic silica, and mixtures thereof, wherein the drying loss of the flow aid after 5 days of conditioning at relative humidity of 95% is less than or equal to 1% by weight.

As described in the specification at page 3, lines 29-34, the flow aid herein is not acting as a drying agent in the composition, and cannot therefore reduce the water absorption of the polyamide. Thus, it was surprising that caking of the polyamide does not occur herein.

The comparative data in the specification herein demonstrates the importance of using a hydrophobicized or hydrophobic silica, compared to the use of a silica that is not hydrophobicized or hydrophobic. See Example 1 and Table 1 at pages 7-8 of the specification, which shows the drying loss of flow aids within the terms of the present invention, i.e, Aerosol® R812 and Aerosol® R972, and a comparative flow aid, i.e., Aerosol® 200; Examples 2-5, which are according to the present invention; and Example 6, which is a comparative example. Results are shown in Table 2, reproduced below.

Table 2

Composition	Flow time after mixing	Flow time after conditioning at high humidity	Percentage change in flow time as a result of conditioning at high humidity
Composition from example 2	12.8 s	13.2 s	+3%
Composition from example 3	13.1 s	14.2 s	+8%
Composition from example 4	13.4 s	13.9 s	+4%
Composition from example 5	15.6 s	17.2 s	+10%
Composition from example 6 (comparison)	12.6 s	18.1 s	+44%

As can be seen, and as pointed out by Applicants' attorney during the above-referenced interview, the flowability is significantly better for the presently-claimed invention compared to the comparative composition. As also pointed out, and as discussed in greater detail below, the applied prior art neither discloses nor suggests the presently-claimed invention.

The rejections of Claims 1-3, 5-12 and 16-17 under 35 U.S.C. § 102(b) as anticipated by, and of Claims 1-3, 5-14 and 16-17 under 35 U.S.C. § 103(a) as unpatentable over, DE 2817027 (Feldmann), are respectfully traversed. Feldmann discloses transparent co-

polyamide powder coatings containing a silicic acid. However, Feldmann neither discloses nor suggests a hydrophobicized or hydrophobic silica, or the superior properties obtained by the use of such a silica compared to a non-hydrophobicized or non-hydrophobic silica, as discussed above with regard to the comparative data of record. Accordingly, it is respectfully requested that these rejections be withdrawn.

The rejection of Claims 1-17 under 35 U.S.C. § 102(b) as anticipated by U.S. 6,110,411 (Clausen et al), is respectfully traversed. Clausen et al discloses a laser sinterable thermoplastic powder having a Tg of less than 50°C, and containing a powdered flow agent selected from a Markush group of such materials, which Markush group includes various silicas, i.e., hydrated silicas, glassy silicas, and fumed silicas, as well as silicates, i.e., calcium silicates and magnesium silicates (column 3, lines 42-50), which thermoplastic powder may also contain a nylon polymer (column 3, lines 51-52). However, Clausen et al neither discloses nor suggests the presently-recited hydrophobicized or hydrophobic silica, or the superior results obtained thereby, as discussed above. Accordingly, it is respectfully requested that this rejection be withdrawn.

The rejection of Claims 1-17 under 35 U.S.C. § 103(a) as unpatentable over U.S. 2,811,499 (Hervey) in view of U.S. 2004/0009340 (Zhu et al) and Clausen et al, is respectfully traversed. Hervey discloses a composition of a finely divided synthetic linear polyamide, and the addition of a finely divided silica, such as a silica aerogel, to improve the pourability of the polyamide (column 2, lines 52-62). Zhu et al discloses powder fluidization additives for increasing the flowability of fine powders by adding, *inter alia*, silica, such as fumed silica [0050], which fine powders may be of polyamides [0066]. The disclosures and deficiencies of Clausen et al have been discussed above. None of the applied references herein disclose or suggest the presently-recited hydrophobic or hydrophobicized silica, or the

superior results obtained thereby, as discussed above. Accordingly, it is respectfully requested that this rejection be withdrawn.

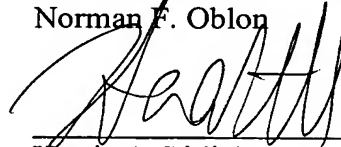
The provisional rejection of Claims 1-17 on grounds of obviousness-type double patenting over Claims 1, 4-9 and 11-25 of copending Application No. 10/686,525 [sic 10/685,525], is respectfully traversed. The claims of the copending application neither disclose nor otherwise suggest the presently-recited flow aid. Accordingly, it is respectfully requested that this provisional rejection be withdrawn.

The rejection of Claims 1-17 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Indeed, the rejection is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that the rejection be withdrawn.

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Norman F. Oblon



Harris A. Pitlick  
Registration No. 38,779

Customer Number

**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 03/06)

NFO:HAP\la